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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SPOONER, LAMONT M

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/991,079	Applicant(s) TSOURIKOV ET AL.	
	Examiner LAMONT M. SPOONER	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Introduction

1. This office action is in response to applicant's claims filed 10/22/08. Claims 1-20 are currently pending and have been examined.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/22/08 has been entered.

Response to Arguments

3. Applicant's arguments, see remarks, filed 10/22/08, with respect to the rejection(s) of claim(s) 1-20 under 35 USC 103 have been fully considered and are persuasive (however, the Examiner notes applicant's arguments that Paik does not provide an answer to a query are

unpersuasive, wherein, a document with relevant information, retrieved based on a query, is an answer to a query in the broadest interpretation, which appear to be the foundation of the majority of applicant's arguments). Therefore, the rejection has been withdrawn. However, based upon applicant's amendments, and upon further consideration, a new ground(s) of rejection is made in view of Paik et al. (Paik, US 6,246,977) which explicitly teach a question/answer system.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Paik et al. (Paik, US 6,263,335).

As per **claims 1 and 12**, Paik teaches a system (Fig. 1 item 10-his system/digital computing system) enabling a user to ask a question (query)

and for providing the user with one or more answers or solutions to such question, the system comprising:

a knowledge base comprising a set of answers having the form S-A-O (Fig. 2 item 115, his KR database constructed of CRC triples, or SAO), and further comprising links to documents corresponding to the set of answers (C.24 lines 1-23-his active link/hyperlink choice to the entire source document);

a problem statement generator configured to receive a natural language query from a user apparatus (C.6 lines 5, 6-his natural language query, Fig. 2 items 120, 100', 105-his query processing and CRC extraction) and to automatically generate a problem statement in the form A- O, S-A, S-X-0 or S, where S, A and O are query elements in the natural language query, where X indicates absence of a query element (ibid, wherein the problem statements contain the S, A, O of the query elements from the natural language query, i.e, Concept, Relation, Concept, wherein his concept is the subject concept, the action is his verb relation, and his second concept is his object concept);

a server coupled to the knowledge base, the server configured to (Fig. 1, item 20-his server, fig. 2 item 115, and 125, his knowledge base

and browser) search the knowledge base using the problem statement to find at least one S-A-O answer, wherein the A and 0, or S and A, or S and 0 or S query elements in the problem statement are also in the at least one S-A-O answer (Fig. 2 item 55, his Query KR to Document KR similarity measure, and C.24 lines 1-11-his CRC, elements found in the answer); and a communication device configured to transmit the at least one answer S-A-O and associated active document links to the user apparatus (C.24 lines 1-23, his answer and his active document link to the actual source document).

As per **claims 2 and 13**, Paik teaches a system as set forth in claim 1. Paik further teaches wherein said server is configured to conduct a search a search of the World Wide Web, (C.4 lines 20-25-his “world wide web” application as applied to his CRC) identify documents that include new answer S-A-O's each comprising query elements in the problem statement, (C.4 lines 20-25-his “world wide web” application as applied to his CRC) store links to such documents, (C.24 lines 1-23, his answer and his active document link to the actual source document) and add such new answer S-A-O's to the knowledge base (C.4 lines 20-25-his “world wide web” application as applied to his CRC).

As per **claims 3 and 14**, Paik teaches claim 2, and further teaches wherein said server is also configured to conduct said search automatically in response to the server determining that no answer S-A-O's exist in the knowledge base comprising the query elements in the problem statement (C.24 lines 29-35-his browser answering questions that can not be found).

As per **claims 4 and 15**, Paik teaches claim 2, and further teaches wherein said server is programmed to prompt the user for a command to initiate the search of the World Wide Web (Fig. 7 his "Net Search" prompt).

As per **claim 5**, Paik teaches claim 1, and further teaches wherein user apparatus converts human voice signals into said problem statement (C.7 lines 29-31-his voice recognition system, see claim 1, problem statement discussion).

As per **claims 6, 7, 9, 10 and 16-19**, Paik further teaches wherein user apparatus converts the at least one answer S-A-O into audio signals, (C.7 lines 29-41-his voice recognition and audio output), including voice-to-text and text-to-voice recognition capability and a client software module including the problem statement generator (C.7 lines 29-41-his voice input to display/text, display/text to audio output, and Fig. 1 items 20 and 25, his client and software module).

As per **claim 8**, Paik teaches a system as set forth in claim 1. Paik further teaches wherein said user apparatus includes a user digital computer for generating said problem statement and receiving said at least one answer S-A-O (Fig. 1, item 25, as applied to claim 1).

As per **claim 11**, Paik teaches system as set forth in claim 1, wherein each of the at least one answer S-A-Os is represented in a sentence format (C.24 lines 10, 11-his output answer sentence).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paik in view of Levin et al. (Levin, US 6,173,279).

As per **claim 20**, Paik teaches a method of providing one or more solutions in response to a user query, the method comprising:

providing a knowledge base of semantically and automatically processed information including a set of answers in the form of S-A-O's

(subject-action-object), and further comprising active links to documents corresponding to the set of answers (see claim 1, Fig. 2 item 115, his KR database constructed of CRC triples, or SAO, C.24 lines 1-23-his active link/hyperlink choice to the entire source document);

processing a natural language user query at a user device, including generating a problem statement in the form A-O, S-A, S-X-O or S from the natural language user query (C.6 lines 5, 6-his natural language query, Fig. 2 items 120, 100', 105-his query processing and CRC extraction), where S, A and O are query elements in the natural language query and X indicates absence of a query element (ibid), converting the problem statement into a query (see claim 1), and sending the query to a semantic server having access to the knowledge base (ibid, wherein the problem statements contain the S, A, O of the query elements from the natural language query, i.e, Concept, Relation, Concept, wherein his concept is the subject concept, the action is his verb relation, and his second concept is his object concept).

generating a knowledge base query from the query at the semantic server and search the knowledge base for one or more S-A-O solutions associated with the problem statement (Fig. 2, ibid, wherein the problem

statements contain the S, A, O of the query elements from the natural language query, i.e, Concept, Relation, Concept, wherein his concept is the subject concept, the action is his verb relation, and his second concept is his object concept);

Paik lacks teaching URL query, and processing the url..., an HTML page to the user device, processing the at least one HTML page ...to output a solution to the user query. However, Levin et al. teaches URL query, and processing the url..., an HTML page to the user device, processing the at least one HTML page ...to output a solution to the user query (C.6.1ines 13-55). Therefore, at the time of the invention, it would have been obvious to modify Paik with Levin's Web search query system, providing the benefit of natural language query through a plurality of data resources, including the Web (Levin, abstract).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Corston et al. (US 6,901,399) teaches natural language query/answer, using SAO modeling.

- Johnson et al. (US 6,618,715) teaches natural language query/answer, using SAO modeling.
- Budzinski (US 6,609,091) teaches natural language query/answer, using SAO modeling.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAMONT M. SPOONER whose telephone number is (571)272-7613. The examiner can normally be reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571/272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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1/7/09

/Patrick N. Edouard/
Supervisory Patent Examiner, Art Unit 2626